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10/825,506	04/15/2004	Ronald L. Boggs	BLL0327US2	8576

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EXAMINER	
MAHMOUDZADEH, NIMA	

ART UNIT	PAPER NUMBER
2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,506	BOGGS ET AL.	
	Examiner	Art Unit	
	NIMA MAHMOUDZADEH	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11 and 13-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1 and 3-10 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3, 4, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hummel et al. (US patent No. 5,675,582) in view of McCanne (US Patent no. 6,611,872).

Regarding claim 1, (Currently Amended) Hummel et al. teach a method of managing deployed trunk circuit capacity, the method:

monitoring trunk circuits to collect traffic usage data (Column 1, lines 5-36 disclose identifying traffic values of the traffic relationships between the network nodes, the most optimum routes);

analyzing the traffic usage data by computing averages of traffic usage data over a period of time (Column 1, line 5-36, discloses the shortest connecting paths, between the network nodes are identified and the traffic volume between the network nodes via the most optimum routes is measured and the capacity of the trunks is then suitably dimensioned, insofar as is possible on the basis of administrative or geographical restrictions or on the basis of capacity limitations of existing trunks. Alternatively,

average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system); and

forecasting trunk circuit capacity requirements based at least in part on the averages (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route);

wherein the averages are computed (Column 1, line 5-36, discloses the shortest connecting paths, between the network nodes are identified and the traffic volume between the network nodes via the most optimum routes is measured and the capacity of the trunks is then suitably dimensioned, insofar as is possible on the basis of administrative or geographical restrictions or on the basis of capacity limitations of existing trunks. Alternatively, average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system) but fail to teach a method wherein the data for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of switches mad other switches not in the

cluster than communications traffic between switches in the cluster. However, Mc Canne teach a method wherein the data for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of switches mad other switches not in the cluster than communications traffic between switches in the cluster (As shown in Fig. 1, the traffic within the high bandwidth backbone is higher than the traffic between the R and OR connected via the Access Link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hummel et al. to include the communication within and between the clusters taught by McCanne in order to reduce the delay for communication within the clusters and improve the capacity between the clusters/groups.

Claim 2, (Canceled)

Regarding claim 3, (Currently Amended) Hummel et al. in view of McCanne teach the method of claim 1, McCanne further teaches the method wherein the cluster comprises at least one switch and trunk circuits to at least two other switches (Fig. 1).

Regarding claim 4, (Original) Hummel et al. in view of McCanne teach the method of claim 1, Hummel et al. further teach the method wherein the traffic usage data comprises a metric that is based upon multiples of a base unit of bandwidth (Column 2, lines 44-50, disclose the traffic flow quanta is matched to the level of the traffic relation traffic flow and to the capacity or, respectively, size of the trunks. For example, a traffic flow quantum of 1 Erlang is advantageous for a traffic relation having

a traffic relation traffic flow of, for example, 15 Erlangs and a capacity of the trunk, that is, a trunk traffic flow of 10 Erlangs).

Regarding claim 11, (Currently Amended) Hummel et al. teach a system that facilitates managing deployed trunk circuit capacity, the system comprising:

monitoring trunk circuits to collect traffic usage data (Column 1, lines 5-36 disclose identifying traffic values of the traffic relationships between the network nodes, the most optimum routes);

analyzing the traffic usage data by computing averages of traffic usage data over a period of time Column 1, line 5-36, discloses the shortest connecting paths, between the network nodes are identified and the traffic volume between the network nodes via the most optimum routes is measured and the capacity of the trunks is then suitably dimensioned, insofar as is possible on the basis of administrative or geographical restrictions or on the basis of capacity limitations of existing trunks. Alternatively, average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system); and

forecasting trunk circuit capacity requirements based at least in part on the time-moving averages (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of

overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route);

wherein the averages are computed (Column 1, line 5-36, discloses the shortest connecting paths, between the network nodes are identified and the traffic volume between the network nodes via the most optimum routes is measured and the capacity of the trunks is then suitably dimensioned, insofar as is possible on the basis of administrative or geographical restrictions or on the basis of capacity limitations of existing trunks. Alternatively, average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system) but fail to teach a method wherein the data for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of switches and other switches not in the cluster than communications traffic between switches in the cluster. However McCanne teaches a method wherein the data for a cluster of switches that is a community of interest with a locality of communication access pattern such that there is less communications traffic across a boundary between the cluster of switches and other switches not in the cluster than communications traffic between switches in the cluster (As shown in Fig. 1, the traffic within the high bandwidth backbone is higher than the traffic between the R and OR connected via the Access Link).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hummel et al. to include the

communication within and between the clusters taught by McCanne in order to reduce the delay for communication within the clusters and improve the capacity between the clusters/groups.

Also, Hummel et al. does not specifically teach the above functions collecting, analyzing and forecasting are performed by separate data collector, data analysis logic and forecasting logic within the routers/switches, it is well known in the art that the respective functions can be implemented in separate functional modules.

Claim 12, (Canceled)

Regarding claim 13, (Original) Hummel et al. in view of McCanne teach the system of claim 12, McCanne further teaches the system wherein the cluster comprises at least one switch and trunk circuits to at least two other switches (Fig. 1).

Regarding claim 14, (Original) Hummel et al. in view of McCanne teach the system of claim 11, Hummel et al. further teach the system wherein the traffic usage data comprises a metric that is based upon multiples of a base unit of bandwidth (Column 2, lines 44-50, disclose the traffic flow quanta is matched to the level of the traffic relation traffic flow and to the capacity or, respectively, size of the trunks. For example, a traffic flow quantum of 1 Erlang is advantageous for a traffic relation having a traffic relation traffic flow of, for example, 15 Erlangs and a capacity of the trunk, that is, a trunk traffic flow of 10 Erlangs).

5. Claims 5, 15, 6,16, 7, 17, 8, 18, 9, 19, 10,and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hummel et al. in view of McCanne further in view of Erlang (www.erlang.com/whatis.html).

Regarding claims 5 and 15, (Original) Hummel et al. in view of McCanne teach the method of claims 1 and 11, but fail to teach the method and system wherein the traffic usage data comprises a metric that is based upon a count of a plurality of connections multiplied by a duration of each of the connections. However, Erlang teaches the method and system wherein the traffic usage data comprises a metric that is based upon a count of a plurality of connections multiplied by a duration of each of the connections (Page 1, discloses an Erlang which is a unit of telecommunications traffic measurement. Strictly speaking, an Erlang represents the continuous use of one voice path. In practice, it is used to describe the total traffic volume of one hour. Minutes of traffic in the hour = number of calls x duration).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the traffic measuring of Hummel et al. in view of McCanne to include Minutes of traffic in the hour = number of calls x duration taught by Enlarg in order to be able to calculate the capacity and/or traffic usage of the trunk in given time.

Regarding claims 6 and 16, (Currently Amended) Hummel et al. in view of McCanne teach the method of claims 1 and 11, Hummel et al. further teach wherein the averages are computed (Column 1, line 5-36, discloses the shortest connecting paths, between the network nodes are identified and the traffic volume between the network nodes via the most optimum routes is measured and the capacity of the trunks is then suitably dimensioned, insofar as is possible on the basis of administrative or geographical restrictions or on the basis of capacity limitations of existing trunks.

Alternatively, average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system) but fail to disclose the at least weekly. However, Erlang disclose the at least weekly (Erlang model B teaches The calculator works up to 25,000 Erlangs / Lines and has the ability to display and print the results of any calculations you have made during the previous week).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the traffic measuring of Hummel et al. in view of McCanne to include Minutes of traffic in the hour = number of calls x duration that can be available for the previous weeks and taught by Erlang in order to be able to calculate the capacity and/or traffic usage of the trunk in given time.

Regarding claims 7 and 17, (Currently Amended) Hummel et al. in view of McCanne teach the method and logic of claims 1 and 11, Hummel et al. further teach wherein the forecasting computes a plurality of forecasts (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route) but fail to teach using a plurality of models. However, Erlang teaches using a plurality of models (Erlang teaches the traffic models such as Erlang B, Erlangc and so on...).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the traffic measuring of Hummel et al. in view of McCanne to include plurality of models taught by Erlarng in order to be able to calculate the capacity and/or traffic usage of the trunk in a given time with different models.

Regarding claims 8 and 18, (Currently Amended) Hummel et al. in view of McCanne teach the method and logic of claim 1 and 11, Hummel et al. teach wherein the forecasting (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route) but fail to teach traffic calculation allowing manual override of at least one model parameter. However, Erlang teach traffic calculation allowing manual override of at least one model parameter (Erlang B model discloses manual GUI traffic calculator).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the traffic measuring of Hummel et al. in view of McCanne to include plurality of models manual traffic calculation taught by Erlarng in order to be able to calculate the capacity and/or traffic usage of the trunk in a given time with different models.

Regarding claims 9 and 19, (Currently Amended) Hummel et al. in view of McCanne further in view of Erlang teach the method and logic of claims 8 18, Hummel et al. teach wherein the forecasting (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route) Erlang further teach using a graphical user interface (GUI) for entering the manual override of the at least one model parameter (Erlang B model discloses manual GUI traffic calculator) .

Regarding claims 10 and 20, (Currently Amended) The method and logic of claims 1 and 11, Hummel et al. further teach the method and logic wherein the forecasting displays forecast (Column 1, line 5-36, discloses average traffic values empirically determined over a long time period can be the basis, these values representing the calculation base in the dimensioning of trunks between network nodes of a communication system. The dimensioning of the trunks based on average traffic values leads to an overload of individual trunks during peak traffic times. In such cases of overload, the traffic relationships are no longer switched via the most optimum routes but via a less optimum route) but fail to teach the method and logic wherein output through a graphical user interface (GUI) (Erlang B model discloses manual GUI traffic calculator).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to the traffic measuring of Hummel et al. in view of McCanne to include plurality of models manual traffic calculation taught by Erlarng in order to be able to calculate the capacity and/or traffic usage of the trunk in a given time with different models.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3-11, and 13-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/
Examiner, Art Unit 2419

/Gregory B Sefcheck/
Primary Examiner, Art Unit 2419
3-16-2009